

A NEW SUBSPECIES OF *POLIAENUS NUEVOLEONIS*
CHEMSAK AND LINSLEY FROM SOUTHERN ARIZONA
(COLEOPTERA: CERAMBYCIDAE)

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In a recent review of Mexican Pogonocherini, Chemsak and Linsley (1975) described the new species *Poliaenus nuevoleonis* from a male taken in northeastern Mexico near Monterrey, Nuevo Leon. Subsequently, I have examined over 70 specimens of that species from the mountains of western Texas and southeastern Arizona, as well as a single specimen from western Mexico about 100 km west of the city of Durango. The specimens from Arizona and western Mexico are readily distinguished from those from Texas and northeastern Mexico and merit subspecific recognition. Below I have modified the original description of *P. nuevoleonis* to accommodate the substantial morphological variation exhibited by the species.

Poliaenus nuevoleonis Chemsak and Linsley

Male.—Form elongate-robust, sides subparallel. Integument shining, red-brown to blackish, clothed throughout with fine, appressed, moderately dense pubescence partially obscuring surface, less densely clothed with long flying hairs which are predominantly dark brown or black on dorsum, white on venter, intermixed on appendages. Head with pubescence brownish white, vaguely washed with gold on occiput; frons two-thirds again as broad as high; eye with lower lobe subquadrate, slightly erect, upper lobe distinctly narrower than interocular space; antenna red-brown, exceeding elytral apex by three or four segments, scape moderately slender, attaining lateral prothoracic tubercle, third segment longest, fourth subequal to scape, half again as long as fifth, fourth to eleventh basally annulate with dense, appressed, white pubescence. Pronotum with pubescence brownish white, distinctly washed with golden-orange on basal half; width across lateral tubercles one and one-fifth to one and one-third times length, dorsal tubercles moderate, distinctly separated by flat pronotal disc, lateral tubercles moderate to rather prominent, blunt, occasionally slightly recurved. Elytra two times as long as wide, with a V-shaped antemedian impression extending from suture to humeri, apices conjointly or separately rounded; lateral and median costae fine, subdued or moderately prominent, extending from humeri to apical third or fourth of elytra, thence becoming evanescent and

indicated only by a few minute dark brown penicilli; subsutural costa indistinct, indicated only by a prominently penicillate sub-basal gibbosity and by an elongate post median swelling containing from one to five prominent, separate or confluent penicilli; punctures coarse, separate basally and laterally, becoming shallower apically, vanishing abruptly at apical third; pubescence moderate to dense, often largely obscuring basal punctures, brownish white, washed with gold along subsutural costae, subsutural penicilli dark brown, occasionally margined with orange. Abdominal sternites densely fringed with white hairs, fifth subequal to fourth, apex broadly rounded or subtruncate. Length 5.9–10.2 mm.

Female.—Form slightly more robust, antennae slightly shorter than in male. Upper lobe of eye about half as wide as interocular space. Fifth abdominal sternite about twice as long as fourth, distinctly impressed medially, apex broadly rounded to subtruncate. Length 6.1–10.9 mm.

Two subspecies, widely separated geographically, can be recognized.

Poliaenus nuevoleonis nuevoleonis Chemsak and Linsley

Lateral and median elytral costae fairly prominent. Pubescence sufficiently dense to largely obscure basal elytral punctures and give dorsum a hoary appearance. Appressed white pubescence covering at least basal three-fifths of antennal segments four to ten. Length 7.4–10.2 mm.

Material examined.—MEXICO: NUEVO LEON: Holotype ♂ from Chipinque Mesa, 5400 ft near Monterrey, VII-23-63 (H. Howden); Monterrey, 1 ♀, III-17-53. COAHUILA: Cuesta La Murralla, 1 ♂, IX-12-76 (J. A. Chemsak, J. Powell, A. and M. Michelbacher). TEXAS: Big Bend National Park, Chisos Mts., Brewster Co.: 1 ♂, VII-4 to 6-61 (R. L. Westcott); 4 ♂ ♂, 2 ♀ ♀, VII-16 to 17-73 (F. T. Hovore, beaten ex *Quercus*). Davis Mountain State Park, Jeff Davis Co.: 1 ♀, VII-18 to 21-73 (F. T. Hovore, at light).

Poliaenus nuevoleonis similnegundo, new subspecies

Elytral costae usually subdued. Pubescence not obscuring basal elytral punctures, integument sufficiently visible to give dorsum a dark brown appearance. Appressed white pubescence covering at most basal half of antennal segments four to ten. Length 6.1–10.9 mm.

Known habitat, range, and flight period.—Oak woodland of southern Arizona (May to September) and Durango, Mexico (July).

Material examined.—Holotype female (California Academy of Sciences Type #13247) from Santa Rita Lodge, elevation 4960 feet, VII-14-75, Madera Canyon, Santa Cruz Co., Arizona (D. D. Skiles at light); allotype (CAS), VII-4-72, Madera Canyon, Santa Cruz Co., Arizona (D. G. Marqua). Paratypes. ARIZONA. Pima Co.: Kitt Peak, 6000 feet, Baboquivari Mts., 1 ♀, VIII-9-78 (D. Skiles, at light); Sabino Canyon, 1 ♂, IX-4-61 (J. S.

Bucket). Cochise Co.: Miller Canyon, Huachuca Mts., 1 ♂, VII-18-71 (D. G. Marqua), 1 ♂, VII-12-75 (E. F. Giesbert); Carr Canyon, Huachuca Mts., 1 ♀, IX-4-59 (R. L. Westcott); Cave Canyon, Huachuca Mts., 1 ♀, VIII-6-78 (D. Skiles, beaten ex dead *Quercus hypoleucooides*); Cochise Stronghold, Dragoon Mts., 1 ♀, VII-12-77 (D. Skiles at light), Cave Creek Ranch, Chiricahua Mts., 1 ♂, VIII-19-65 (G. W. Forister, at light); 5 mi W Portal, Chiricahua Mts., 1 ♂, VIII-14-58 (G. G. Moore). Santa Cruz Co.: Santa Rita Mountains, 6000 feet, 1 ♂, IX-15-33 (Bryant, Lot 238; labeled "*Poliaenus negundo* (Schaeffer)/Det. Knoll '56"; also labeled "*Pogonocherus arizonicus* Schaeffer"). Madera Canyon, Santa Rita Mountains, 1 ♂, IX-4-66, 1 ♂, 1 ♀, IX-5-66 (M. E. Pendleton); 2 ♂ ♂, VIII-16-67 (C. D. Johnson, at light); 1 ♂, 1 ♀, IX-3 to 5-69 (J. Powell, at light); 1 ♀, VII-23 to 25-58, 1 ♀, IX-2-59 (R. L. Westcott); 1 ♀, IX-3-64 (G. H. Nelson, at light); 1 ♀, IX-5-59 (L. M. Martin, at light); 1 ♀, V-22-63 (J. G. Franclemont, 4880 feet); 1 ♀, IX-4-67 (A. S. Menke, 4880 feet); 1 ♂, IX-29-63 (V. L. Westerby, 4880 feet); 1 ♀, VII-1-63, 1 ♂, VII-2-63, 1 ♀, VII-5-63 (J. D. Marshall, 4880 feet); 1 ♀, VIII-6-69, 1 ♀, VIII-71, 1 ♀, VIII-28-71 (E. F. Giesbert, at light); 3 ♂ ♂, VII-23 to 24-71, 1 ♂, VIII-28-71, 2 ♀ ♀, VIII-8-77, 2 ♂ ♂, 1 ♀, VII-12-78 (F. T. Hovore at light); 1 ♂, 1 ♀, VII-27-76 (F. T. Hovore, beaten together ex dead *Quercus*). 1 ♀, VII-23-74, 1 ♀, VII-9-75, 1 ♀, VII-14-75, 1 ♂, IX-12-75, 1 ♂, IX-20-75, 1 ♀, VII-10-77, 1 ♂, VII-12-77 (D. Skiles, at light and beaten ex dead *Quercus*); 17 ♀ ♀, VII-7, 9, 19, 29-71, IX-7-71, VII-11, 12, 18-72, VIII-4, 8-72, VII-21-73, VII-20-74, VII-15-75, VIII-15-75, 6 ♂ ♂, VII-18, 19, 28-71, IX-7-71, VII-14-75, VIII-15-75 (D. G. Marqua, at light).

Also assignable to this subspecies but not included as paratypes: 1 ♂, Huachuca Mts., Arizona (Van Dyke collection); 1 ♂, 3 mi E El Salto, Durango, Mexico, VII-3-64 (L. A. Kelton).

Diagnosis.—The fact that *P. nuevoleonis*, though rather common, remained undescribed until recently is undoubtedly due to its remarkable resemblance to *P. negundo* (Schaeffer) and to the fact that both species are frequently taken together at light in oak woodlands throughout southeastern Arizona.

Presumably, these congeners are able to coexist by utilizing different hosts. *Poliaenus negundo* is known to attack sumac and box elder (Linsley, 1935), and *P. nuevoleonis* probably attacks various species of oak, since a small number of specimens have been beaten from dead, leaved branches of *Quercus* sp. in the Davis and Chisos Mountains of Texas (F. T. Hovore, E. F. Giesbert) and from dead, leaved branches of *Q. hypoleucooides* A. Camus in the Santa Rita and Huachuca Mountains of southern Arizona (F. T. Hovore, D. Skiles). Beyer (1908) reported that four specimens of *P. negundo* from Arizona's Huachuca Mountains emerged in 1907 from oak twigs girdled in 1905 by *Oncideres quercus* Skinner. However, as I am

unaware of any other records of *P. negundo* from oak, I am inclined to believe that Beyer in fact reared *P. nuevoleonis*.

Poliaenus nuevoleonis and *P. negundo* can usually be distinguished with the unaided eye by the different color patterns of the elytral pubescence. In the former the pattern is very faint and the elytra appear rather uniformly brown with a slight hoary wash. In *negundo* the dark brown base of the elytra contrasts sharply with the dense, yellowish-brown pubescence of the antemedian V-shaped impression. Despite this difference, specimens of *P. nuevoleonis* are easily mistaken for slightly rubbed specimens of *P. negundo*.

Under the microscope the two species are readily distinguished by the distinct structures of the pronotal disc. In *nuevoleonis* the discal tubercles can best be described as circular cones arising from a flat pronotal disc; in *negundo* the discal tubercles are little more than the lateral limits of a discal pronotal gibbosity. In addition, the flying hairs on the dorsal surface of the posterior tarsi are brown intermixed with white in *nuevoleonis*, whereas they are almost invariably entirely white in *negundo*, though they may appear dark when illuminated from certain angles.

From the long series of *P. nuevoleonis* I have examined, it is apparent that *P. nuevoleonis*, *P. sparsus* Chemsak and Linsley, and *P. batesi* Linsley are closely related and may even be conspecific. However, the latter two species are known only from single specimens so that a definitive analysis of the specific status of each must await the collection of further material. I have examined the type of *P. sparsus* (California Academy of Sciences) and a 35 mm color slide of the type of *P. batesi* (courtesy E. G. Linsley and J. A. Chemsak) and offer the following observations.

The structural similarities between the diminutive type of *P. sparsus* and smaller specimens of *P. nuevoleonis similnegundo* leave me with the impression that the two species may ultimately prove to be one. Nevertheless, when compared side by side with a series of small *P. nuevoleonis similnegundo*, the specimen of *P. sparsus* immediately stands apart as having rather testaceous integument rather densely covered with golden pubescence, as opposed to dark brown integument rather sparsely covered with grey pubescence. In addition, *P. sparsus* is slightly smaller than the smallest paratypical *P. nuevoleonis similnegundo*, and the basal elytral punctures of the former are distinctly coarser. Hence the two species cannot be synonymized on the basis of the available material.

On the other hand, I find it difficult to believe that *P. nuevoleonis* and *P. batesi* are specifically distinct. Specimens of *nuevoleonis*, particularly densely pubescent ones such as those I have seen from the Chisos Mountains of Texas, key to *batesi* in Linsley's (1935) key to the genus. In addition, although I have seen only a slide of the unique specimen of *batesi* from central Guatemala, the slide clearly shows all diagnostic characters,

and the specimen differs from large, densely pubescent specimens of *nuevoleonis* only in the more prominent and dramatically orange penicilli of the subsutural elytral costae. However, the subsutural penicilli of *nuevoleonis*, while appearing dark brown or black to the naked eye, are in fact often margined with orange. This is particularly true of the postmedian penicilli. Hence the orange penicilli of *batesi*, which under the microscope are seen to have dark brown centers at the base of the elytra and a few dark brown hairs on the apical third of the elytra, merely appear to be extreme versions of a color tendency apparent in *nuevoleonis*.

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